

# MATERIAL SAFETY DATA SHEET

The SDS is prepared according to the MOEL Public notice  
No 2020-130

Revision date 2024-Mar-12

Revision number 1.03

**MSDS Number:** AA12341-0030531408

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### A Product identifier

Product name	GEOlube <sup>®</sup> BCF 11
Product code	745667
Synonyms	None

### B Relevant identified uses of the substance or mixture and uses advised against

Recommended use [RU]	Lubricant
Uses advised against	None known

### C Details of the supplier of the safety data sheet

Importer	CO CHEM Ltd 1207, 415, Heungan-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea 14059
Supplier	GEO Specialty Chemicals UK Ltd Charleston Road, Hardley, Hythe Southampton, Hampshire SO45 3ZG United Kingdom Phone: +44 (0)23 80894666 Fax No: +44 (0)23 80243113

Responsibility Statement	For further information, please contact <a href="mailto:safety-data-sheet-fp@geosc.com">safety-data-sheet-fp@geosc.com</a>
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### D Emergency telephone number

Emergency telephone	24 Hour Emergency Phone Number GEO Specialty Chemicals UK Ltd +44 (0)23 80891806
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CO CHEM Ltd  
+82-10-9265-7633

## 2. HAZARDS IDENTIFICATION

### A Classification of the substance or mixture

Reproductive toxicity	Category 1B
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**B Label elements****Signal word**

Danger

**Hazard statements**

H360F - May damage fertility

**Precautionary Statements - EU (§28, 1272/2008)****Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF exposed or concerned: Get medical advice/attention

**Storage**

Store locked up

**Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**C Other hazards which do not result in classification**

Not applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Chemical name	Common name	CAS No	Korea INV No	Weight-%
Tetrapropenylsuccinic anhydride	(Tetrapropenyl)succinic anhydride	26544-38-7	KE-10752	$\geq 1 - < 5$
4,4'-Isopropylidenediphenol	4,4'-Isopropylidenediphenol	80-05-7	KE-03399 KE-23982	$\geq 0.1 - < 1$

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

**4. FIRST AID MEASURES****A Description of first aid measures****General advice**

In case of adverse health effects seek medical advice.

**Eye contact**

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

**Skin contact**

Rinse with running water and soap. If irritation should develop, get medical attention.

**Ingestion**

Rinse mouth with water, then drink one or two glasses of water.

**Inhalation**

Remove to fresh air.

**B** Most important symptoms and effects, both acute and delayed

Most important symptoms and effects	None known.
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**C** Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES****A** Extinguishing media

Suitable extinguishing media	Water spray jet, Alcohol-resistant foam, Extinguishing powder, Carbon dioxide.
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Extinguishing media which must not be used for safety reasons	High pressure waterjet.
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**B** Special hazards arising from the substance or mixture

Special Hazard	Formation of toxic gases is possible during heating or in fires.
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Hazardous combustion products	Carbon oxides. Aldehydes. Toxic vapors. Irritating vapors.
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**C** Advice for firefighters

Special protective equipment for firefighters	Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.
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Firefighting measures	Cool exposed containers with water spray after extinguishing fire.
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**6. ACCIDENTAL RELEASE MEASURES****A** Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear suitable protective clothing and gloves.
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**B** Environmental precautions

Environmental precautions	Do not empty into drains/surface water/ground water. Inform authorities in the event of product spillage to water courses or sewage systems.
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**C** Methods and material for containment and cleaning up

Methods for cleaning up	Remove with liquid-absorbing material (sand, peat, sawdust).
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**D** Reference to other sections

See Section 12 for additional Ecological Information

**7. HANDLING AND STORAGE****A** Precautions for safe handling

Advice on safe handling	Ensure that workrooms are adequately ventilated. Avoid spraying/aerosol generation. Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapors
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**B Conditions for safe storage, including any incompatibilities****Technical measures and storage conditions**

When storing in tanks above 60 °C, cover with a layer of nitrogen-protective gas.  
Do not store together with reductants. Do not store together with oxidants.  
Keep away from heat. Protect from direct sunlight  
Keep only in the original container in a cool, well-ventilated place

**Materials to avoid**

Reaction with strong acids. Reaction with oxidants.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****A Control parameters****Occupational exposure limit value**

Chemical name	CAS No	National occupational exposure limits	ACGIH TLV
Tetrapropenylsuccinic anhydride	26544-38-7	No data available	No data available
4,4'-Isopropylidenediphenol	80-05-7	No data available	No data available

**B Appropriate engineering controls**

Environmental exposure controls No data available

**C Personal Protective Equipment**

Eye/face Protection Tight sealing safety goggles.

Hand Protection PVC or Nitrile

Skin and body protection Wear suitable protective clothing

Respiratory protection When processing in open systems with aerosol formation wear suitable respiratory protection to avoid inhalation of aerosol particles.

Other personal protection data Eyewash fountains and safety showers must be easily accessible.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	
Physical state	liquid
Color	light yellow
Odor	mild
Odor threshold	No data available
pH	No data available
Melting / freezing point	No data available
Boiling point / boiling range	No data available
Flash point	> 200 °C / 392 °F - ASTM D 92-97
Evaporation rate	No data available
Flammability (solid, gas)	No data available

Flammability Limit in Air	
Upper flammability limit	No data available
Lower flammability limit	No data available
Vapor pressure	No data available
Vapor density	No data available
Specific gravity	1.001
Solubility(ies)	
Solubility (water)	insoluble
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Viscosity	
Kinematic viscosity	245 mm <sup>2</sup> /s @ 40 °C - ASTM D 445-97
Dynamic viscosity	No data available
Molecular weight	mixture

## 10. STABILITY AND REACTIVITY

### A Reactivity

Reactivity No data available.

### B Chemical stability

Chemical stability Stable under normal conditions.

### C Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.

### D Conditions to avoid

Conditions to avoid No data available.

### E Incompatible materials

Materials to avoid Reaction with strong acids. Reaction with oxidants.

### F Hazardous decomposition products

Hazardous decomposition products Can decompose slowly with localized heating above 150°C.

## 11. TOXICOLOGICAL INFORMATION

### A Information on likely routes of exposure

#### Acute health hazard

Eye contact This product is not considered to be an eye irritant.

Skin contact This product is not considered to be a skin irritant.

Ingestion No data available.

Inhalation No data available.

## B Health hazards

### Acute toxicity - Product Information

Oral LD50 > 2,000 mg/kg (analogy)

Dermal LD50 No data available

Inhalation LC50 No data available

### Acute toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Tetrapropenylsuccinic anhydride 26544-38-7 (>= 1 - < 5)	= 2550 mg/kg ( Rat )	--	--
4,4'-Isopropylidenediphenol 80-05-7 (>= 0.1 - < 1)	= 3300 mg/kg ( Rat )	= 3000 mg/kg ( Rabbit )	--

Skin corrosion/irritation not irritating (analogy)

Serious eye damage/eye irritation not irritating (analogy)

Sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity No data available

Reproductive toxicity Category 1B. (based on 4,4'-Isopropylidenediphenol)

Specific target organ toxicity -  
Single exposure No data available

Specific target organ toxicity -  
Repeated exposure No data available

Aspiration hazard No data available

## 12. ECOLOGICAL INFORMATION

### A Toxicity

#### Acute aquatic toxicity - Product Information

Fish No data available

Crustacea No data available

Bacteria toxicity EC0 > 100 mg/l (analogy)

Algae/aquatic plants No data available

#### Acute aquatic toxicity - Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Tetrapropenylsuccinic anhydride 26544-38-7 (>= 1 - < 5)	--	LC50: >100mg/L (96h, Oncorhynchus mykiss)	--

4,4'-Isopropylidenediphenol 80-05-7 ( $\geq 0.1 - < 1$ )	EC50: =2.5mg/L (96h, Pseudokirchneriella subcapitata)	LC50 (96 h flow-through) 3.6 - 5.4 mg/L (Pimephales promelas) LC50 (96 h static) = 9.9 mg/L (Brachydanio rerio) LC50 (96 h ) = 4 mg/L (Oncorhynchus mykiss) LC50 (96 h static) 4.0 - 5.5 mg/L (Pimephales promelas)	EC50: =10.2mg/L (48h, Daphnia magna) EC50: =3.9mg/L (48h, Daphnia magna)
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**B Persistence and degradability**

Persistence and degradability	No data available
Ultimate biodegradation	Not readily biodegradable.

**C Bioaccumulative potential**

Bioaccumulative potential	No data available
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**D Mobility in soil**

Mobility	No data available
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**E Results of PBT and vPvB assessment**

Results of PBT and vPvB assessment No data available

**F Other adverse effects**

Other information	No other ecological studies have been carried out on this product.
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## 13. DISPOSAL CONSIDERATIONS

**A Waste treatment methods**

Disposal of wastes	Dispose of according to regulations.
Contaminated packaging	Packaging that cannot be cleaned are to be disposed of in the same manner as the product. Disposal must be made according to official regulations.

## 14. TRANSPORT INFORMATION

US DOT Not applicable

- 14.1 DOT UN/NA Number
- 14.2. UN proper shipping name
- 14.3 Hazard class
- 14.4 Packing group
- 14.5 Marine pollutant

Land transport (ADR/RID) Not applicable

- 14.1 UN number
- 14.2. UN proper shipping name
- 14.3 Hazard class
- 14.4 Packing group
- 14.5 Environmental hazard

Air transport (ICAO-TI / IATA-DGR) Not applicable

- 14.1 UN number
- 14.2. UN proper shipping name

- 14.3 Hazard class
- 14.4 Packing group
- 14.5 Environmental hazard

Sea transport (IMDG) Not applicable

- 14.1 UN number
- 14.2. UN proper shipping name
- 14.3 Hazard class
- 14.4 Packing group
- 14.5 Environmental hazard

14.6 Special precautions for user  
Not applicable

## 15. REGULATORY INFORMATION

### A Industrial Safety and Health Act

Article 37 - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying  
Not determined

Article 38 - Harmful substances requiring permission  
Not determined

Hazardous substances subject to control  
Not applicable

Harmful agents subject to workers requiring health examination  
Not applicable

Harmful agents subject to work environment monitoring  
Not applicable

Occupational exposure limits  
See section 8 for more information

### B Chemicals Control Act

Not applicable

### C Safety Control of Dangerous Substances Act

Not applicable

### D Waste Control Act

Dispose of contents/container in accordance with all local, regional, national, and international regulations.

### E Other information

#### International Inventories

Australia (AICS)  
All ingredients are on the inventory or exempt from listing

Canada (DSL)  
All ingredients are on the inventory or exempt from listing

Canada (NDSL)  
None of the ingredients are on the inventory.

**China (IECSC)**

All ingredients are on the inventory or exempt from listing

**European Union (EINECS)**

All ingredients are on the inventory or exempt from listing

**European Union (ELINCS)**

None of the ingredients are on the inventory.

**Japan (ENCS)**

All ingredients are on the inventory or exempt from listing

**EC-Label**

All ingredients are on the inventory or exempt from listing

**Philippines (PICCS)**

All ingredients are on the inventory or exempt from listing

**United States (TSCA)**

All ingredients are on the inventory or exempt from listing

**Legend**

**AIIC** - Australian Inventory of Industrial Chemicals

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**IECSC** - China Inventory of Existing Chemical Substances

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

## 16. OTHER INFORMATION

**Product code** 745667

**Revision date** 2024-Mar-12

**MSDS Number:** AA12341-0030531408

**Key or legend to abbreviations and acronyms used in the safety data sheet**

NAV - Not available

**Additional information**

GEOLube® is a registered trademark of GEO Specialty Chemicals, Inc.

**Disclaimer**

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